

REMARKS

Reconsideration of the above-identified application in view of the foregoing amendments and following remarks is respectfully requested.

A. Status of the Claims and Explanation of Amendments

Claims 1-2, and 8-34 are now pending.

By this paper, claims 1, 10, 13 and 14 are amended to address matters of form to avoid the use of the pronouns “it” and “its” and the redundant expression “the said.” Claim 9 is amended to delete the first “wherein” clause and incorporate its text into the body of the claim. These amendments are not made for any substantial reason related to patentability.

Also, new claims 22-34 are added to define further inventions disclosed in Applicant’s specification. Independent claim 22 is directed to “[a] modular automobile headlight” that emits a light beam having “at least three intensity zones” that corresponding to a three “pre-determined” distances away from the headlight. This headlight comprising “a plurality of modules, each said module comprising an electroluminescent diode and a reflecting surface disposed to receive and reflect luminous rays produced by the diode and to contribute to a one of the three intensity zones of the luminous beam” and these “modules are adapted for mechanical assembly into a unit comprising the headlight.” Support for this claim is found throughout the application as original filed, including for example at paragraph [0045].

Claims 23-26 add that this headlight “further comprises at least one halogen or discharge-lamp configured to emit luminous rays to contribute to a one of the three intensity zones of the luminous beam,” “the halogen or discharge-lamp contributes only to a one of the three intensity zones farthest away from the headlight,” “the intensity zone of the halogen or discharge-lamp is approximately 70 meters away from the headlight,” and “the intensity zone of the halogen or discharge-lamp is approximately 200 meters away from the headlight.” Support for these claims is found throughout the application as original filed, including for example at original claims 9-10, and paragraphs [0041, 0042, 0063].

Claims 27, 28 and 33 recite “each of the reflecting surfaces is separate from others of the reflecting surfaces,” “the diodes are positioned a distance from one another,” and “the diodes are positioned a distance from one another.” Support for these claims is found throughout the application as original filed, including for example at original claims 12 and 14, and paragraphs [0045, 0046, 0058].

Claim 29 recites that one of the “modules comprises between 2 and 20 electroluminescent diodes” and that module “is designed to contribute only to a one of the three intensity zones farthest away from the headlight.” Support for this claim is found throughout the application as original filed, including for example at original claim 7.

Claim 30 recites that one of the modules “designed to contribute only to a one of the three intensity zones farthest away from the headlight” has “a non-horizontal reflecting surface” that is not aligned with a cutoff line defined by the luminous beam.

Support for this claim is found throughout the application as original filed, including for example original claim 8 and paragraphs [0040, 0055, 0057].

Claim 31 recites the modules “are distributed in various parts of a front surface of the automobile.” Support for this claim is found throughout the application as original filed, including for example paragraphs [0057-0058].

Claim 32 recites “the diode is set into the reflecting surface.” Support for this claim is found throughout the application as original filed, including for example paragraph [0045].

Claim 34 defines the “three intensity zones” as “a long-range zone approximately 70 meters away from the headlight, a comfort zone approximately 40 meters away from the headlight, and a breadth zone approximately 30 meters away from the headlight.” Support for this claim is found throughout the application as original filed, including for example paragraph [0023].

No new matter will be added to this application by entry of these amendments. Entry of the above-amendments and new claims is respectfully requested.

The February 1 office action had rejected the claims pursuant to 35 U.S.C. §§ 102(b) and 103(a) over U.S. Patent Application No. 2003/0227774 to Martin et al. (“Martin”), U.S. Patent No. 5,984,495 to Chapman et al. (“Chapman”) or Chapman in view of U.S. Patent No. 6,053,623 to Jones et al. (“Jones”). [2/1/06 Office Action at pp. 2-4]. The patentability of the pending claims over these references is addressed below.

B. Claims 1-2, 8, and 11-18 are Novel over Martin

Applicant's claim 1 recites:

1. Headlight device, the intention of which is to emit at least one type of luminous beam, comprising
at least one luminous source and
at least one reflecting surface, to reflect luminous rays produced by the luminous source,
wherein the at least one luminous source comprises between 2 and 20 electroluminescent diodes,
wherein each electroluminescent diode is oriented in such a way that a totality of ray propagation of the diode reaches, on the reflecting surface, a specific area of reflection which is dedicated to the diode, each specific area being more specially intended to fulfill a particular contribution of range, of breadth, or of comfort in the production of the luminous beam, and at least two of the electroluminescent diodes are used for a range contribution.

Claim 1 is distinguished from Martin for at least two reasons. First, Martin treats his diodes and reflectors as a unit that together forms a particular pattern, and thus Martin fails to disclose that the diodes and reflecting surface and configured so that specific areas of the reflecting surface contribute to particular aspects of the luminous beam (e.g., range, breadth, or comfort). For example, in Martin's Figure 3A and 3B, an embodiment is shown with a segmented reflector (312) having reflective segments (314-1 and 314-3). [Martin at ¶0057]. These "reflective segments 314-1 and 314-3 are shaped to provide a far-field pattern 302." [Martin at ¶0057]. Likewise, in the embodiment of Martin's Figures 8A and 8B and Figures 10A and 10B, the reflective segments (814-1, 814-2, 814-3, 1010-1, 1010-2, 1010-3, 1010-4) contribute to form a single far-field pattern (802 or 1002). [Martin at ¶¶0061, 0065]. At best, Martin discloses that a

collection of LEDs and reflective segments produce a single far-field pattern. Absent from this disclosure is any teaching that specific areas of a reflecting surface intended to fulfill a particular contribution of range, of breadth, or of comfort in the production of the luminous beam as recited in Applicant's claim 1.

Applicant notes the final paragraph of Martin states that a first group of LEDs can be used to generate a narrow flood light pattern and a second group of LEDs can be used to generate a wide flood light pattern:

Various other adaptations and combinations of features of the embodiments disclosed are within the scope of the invention. For example, embodiments of lamp 200 can be used in commercial lighting to generate a narrow flood light pattern or a wide flood light pattern. In one embodiment, a ***first group*** of LED sources can be powered up to generates the ***narrow flood light pattern*** while a ***second group*** of LED sources can be powered up to generate the ***wide flood light pattern***. [Martin at ¶0080 (emphasis added)].

These groups of LED sources are apparently operated in an alternative manner – either one group is on or the other group is on. Martin never suggests that both groups of LEDs should be simultaneously powered. Thus, missing from this paragraph and from the remainder of Martin's disclosure is any teaching, disclosure or suggestion that "each specific area [of the reflecting surface] being more specially intended to fulfill a particular contribution of range, of breadth, or of comfort in the production of the luminous beam" as recited in Applicant's claim 1.

Second, Martin fails to specify that "at least two of the electroluminescent diodes are used for a range contribution" as recited in Applicant's claim 1.

Likewise, Martin fails to teach, disclose or suggest “a first of the electroluminescent diodes being disposed and adapted together with the associated reflecting surface to fulfill a range contribution of the luminous beam, a second of the electroluminescent diodes being disposed and adapted together with the associated reflecting surface to fulfill a breadth contribution of the luminous beam, a third of the electroluminescent diodes being disposed and adapted together with the associated reflecting surface to fulfill a comfort contribution of the luminous beam” as recited in Applicant’s clam 13.

For at least similar reasons, new claims 22-34 are also believed to be patentably distinct from Martin.

Accordingly, Applicant respectfully suggests that independent claims 1 and 13, and dependent claims 2, 8, 11-12, 14-18 and 22-34 are novel over Martin.

C. Claims 9-10 and 19-21 are Novel Over Chapman Alone And Are Patentably Distinct From Chapman in view of Jones

Applicant’s claim 9 recites as follows:

9. Headlight device for a motor vehicle, the intention of which is to emit at least one type of luminous beam, comprising
at least one electroluminescent diode adapted to emit a first visible light;
a halogen-lamp or a discharge-lamp adapted to emit a second visible light; and
at least one reflecting surface, to reflect luminous rays produced by the diode and lamp,
wherein the first and second visible light comprise the luminous beam.

Chapman is directed to a “Dual Spectrum Illumination System.” In this system, a halogen lamp [18] provides “a high intensity beam of **visible** light” and light emitting diodes [28, 32] emit “any **other region** of the spectrum.” [Chapman, Col. 1, lines 67 – Col. 2, lines 6 (emphasis added)]. Thus, the diode may emit infrared or ultraviolet light that is invisible to the naked eye. [Chapman, Col. 2, lines 5, 21-29].

Thus, a first deficiency in Chapman is that it fails to teach, disclose or suggest “at least one electroluminescent diode adapted to emit a first visible light” as recited in Applicant’s claim 9. To the contrary, it suggests that it would be advantageous to emit an invisible spectrum of light from the diodes.

Moreover, Chapman’s system is adapted to create a diode-based beam or a halogen-based beam, but is not shown to create a beam with both diode-based and halogen-based contributions. Said differently, Chapman envisions either using a halogen lamp for the airplane landing **or** using the infrared LEDs – but not both. [Chapman, Col. 5, lines 18-20 (“The pilot has the option to select one of three options, off/visible/infrared, by setting the switch 44.”)] Accordingly, Chapman’s “system is controlled by a three position switch (OFF-ILLUMINATION 1-ILLUMINATION 2).” [Chapman, Col. 3, lines 54-56].

Thus, a second deficiency in Chapman is that it fails to disclose “the first [visible light of the electroluminescent diode] and second visible light [of the halogen or discharge-lamp] comprise the luminous beam” as recited in Applicant’s claim 9.

Jones is directed to a waterproof light. The office action alleged that Jones teaches to substitute a xenon lamp for the halogen lamp of Chapman. [2/1/06 Office Action at p. 4]. Without commenting on that assertion, Applicant notes that Jones – like Chapman – fails to that the luminous beam of the headlight comprises of the first visible light of the electroluminescent diode as well as the second visible light of the halogen or discharge-lamp as recited in Applicant's claim 9.

Likewise, Applicant's claim 21 is distinguished from Chapman and Jones in that its luminous beam has three areas (i.e., comfort, breadth and range) and that a electroluminescent diode provides the luminous rays for the areas of comfort and breadth, while a halogen or discharge lamp simultaneously provides the luminous rays for the areas of range.

For at least similar reason, new claims 22-34 are also believed to be patentably distinct from Chapman alone or in combination with Jones.

Accordingly, Applicant respectfully suggests that independent claim 9 and dependent claims 10 and 19-34 are novel over Chapman alone and patentably distinct from Chapman in view of Jones.

Applicant has chosen in the interest of expediting prosecution of this patent application to distinguish the cited documents from the pending claims as set forth above. These statements should not be regarded in any way as admissions that the cited documents are, in fact, prior art. Likewise, Applicant has chosen not to swear behind

Martin. Applicant, however, reserves the right, as provided for by 37 C.F.R. § 1.131, to do so in the future as appropriate.

Finally, Applicant has not specifically addressed the rejections of the dependent claims. Applicant respectfully submits that the independent claims, from which they depend, are in condition for allowance as set forth above. Accordingly, the dependent claims also are in condition for allowance. Applicant, however, reserves the right to address such rejections of the dependent claims in the future as appropriate.

CONCLUSION

For the above-stated reasons, this application is respectfully asserted to be in condition for allowance. An early and favorable examination on the merits is requested. In the event that a telephone conference would facilitate the examination of this application in any way, the Examiner is invited to contact the undersigned at the number provided.

THE COMMISSIONER IS HEREBY AUTHORIZED TO CHARGE ANY ADDITIONAL FEES WHICH MAY BE REQUIRED FOR THE TIMELY CONSIDERATION OF THIS AMENDMENT UNDER 37 C.F.R. §§ 1.16 AND 1.17, OR CREDIT ANY OVERPAYMENT TO DEPOSIT ACCOUNT NO. 13-4500, ORDER NO. 1948-4838.

Respectfully submitted,
MORGAN & FINNEGAN, L.L.P.

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By: Matthew K. Blackburn

Matthew K. Blackburn
Registration No. 47,428

Correspondence Address:

MORGAN & FINNEGAN, L.L.P.

3 World Financial Center

New York, NY 10281-2101

(212) 415-8700

Telephone

(212) 415-8701

Facsimile